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CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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TYPE DESIGNATIONS

1. I was asked to confer with [REG-162] (ballistician at Ostashkov) to correct the discrepancies in type numbers assigned to the various rocket projects at Ostashkov. 50X1

2. [REG-162] and I concurred on the following designations. [These numbers agree with previous testimony by REG-162 and REG-154.]

   a. R-10. Modified A-4 for 300-kilometer range.

   b. R-14. Long-range rocket for approximate range of 3000 kilometers.

   c. R-15. Pilotless long-range aircraft.

   d. R-113. Antiaircraft rocket.

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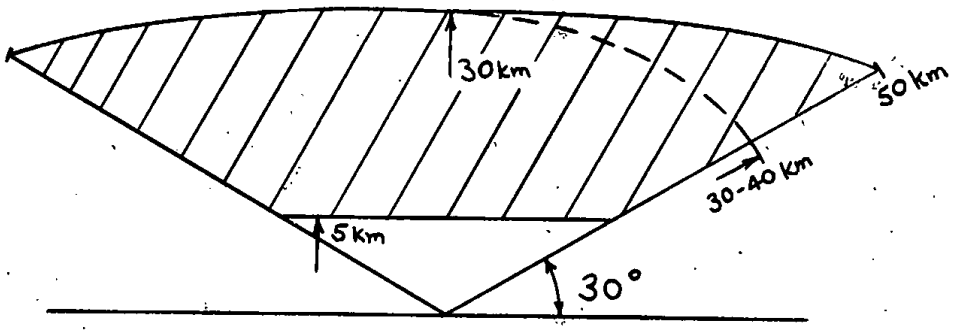
R-113 ANTIAIRCRAFT ROCKET

3. A serious discrepancy was noted between the effectiveness diagrams for the R-113 as described [redacted] and [REG-162]. We agreed on the diagram shown below: 50X1-HUM



Thus, the maximum effective altitude is 30 kilometers, minimum altitude 5 kilometers. The maximum slant range is approximately 50 kilometers; the missile will only travel between 30 and 40 kilometers under combustion (see dotted line) and coast the rest of the way. The burning time was to be 30 to 35 seconds, with a final velocity of 1000 meters per second.

4. Two types of explosive charges were mentioned as alternatives to the proposal for this project. Dr. ALBRING proposed a single charge, detonated at as close a range as possible. Some of the others, including myself, were in favor of a splinter charge with a cone of 30 to 50 degrees.

5. Work on proximity fuses and target seeker heads was carried on by groups at Ilinskaya and Monino. No details on this work were available to the Ostashkov group.

R-10 MODIFICATION OF A-4 MISSILE

6. The R-10 was designed for a range of approximately 300 kilometers, with combustion cut-off occurring between 40 and 50 kilometers.

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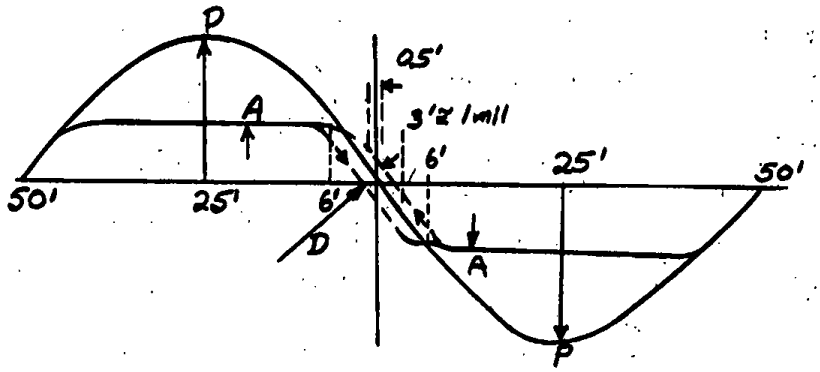
7. I submit the following basic control diagram for right-left direction-finding control. The values should be multiplied by 6 for elevation control.



The total direction-finding range is plus or minus 50 minutes; direction-finding sensitivity plus or minus 0.5 minutes. The possible approachable accuracy is six times this figure or 3 minutes. (The factor of six was determined by Bahnmodell experiments.) The steering command is limited, after differentiation, to a value A which corresponds to an error of 6 minutes. The differential D is effective only within the range between plus and minus 6 minutes. The amplitude of the maximum steering command was only so strong that sufficient rudder deflection was still available for rocket stabilization. The integral of the radio command is applied with a very small coefficient to the gyroscopes in order to compensate for constant error as a result of non-symmetry of the rocket. This integral is turned off for the last oscillation of the rocket across the required course, to improve the final stability.

8. The characteristic resonance of the Markgraf gyroscopes is at 25 to 30 cycles. Damping of the control circuit in the rocket is effective up to 8 to 10 cycles.

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